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••••			U	.S. PATENT D	OCUMENTS	S		
Cite No.	NUMBER I	Kind Code	Name of Patentee or Applicant of Cited Document			Date of Publication of Cited Document		Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
AA - 4,819,234			Huber	•		04/04	/89	
AB	*4,872,167		Maez	awa et al.		10/03	/89	
AC	*5,168,554		Luke	-		12/01	/92	
AD	- 5,301,325		Benso	n		04/05	/94	
ΑE	- 5,333,280		Ishika	wa et al.		07/26	/94	
AF	- 5,450,575		Sites			09/12	/95	
AG	*5,504,932		Vassi	liadis et al.		04/02	/96	
AH	- 5,533,192		Hawle	ey et al.		07/02/96		
AI	*5,557,761		Chan et al. Halliwell et al.			09/17/96 10/08/96		
ΑJ	- 5,564,051							
AK	- 5,581,764		Fitzge	erald et al.		12/03	/96	
AL	*5,594,864		Traub	en		01/14	/97	RECEIVED
AM	- 5,598,560		Benso	n		01/28	/97	MAY 2-9-2002
AN	*5,632,032		Ault e	et al.		05/20		
AO	- 5,652,889		Sites			07/29	/97	chnology Center 2100
AP	*5,712,996		Schep	ers		01/27	/98	
AQ	- 5,754,855		Mille	r et al.		05/19	/98	
AR	- 5,768,591		Robin	son		06/16	/98	
AS	- 5,768,592		Chan	g ·		06/16	/98	
AT	- 5,774,721		Robin	son		06/30	/98	
AU	- 5,787,245		You e	t al.		07/28	/98	
ΑV	*5,805,892		Nakaj	ima		09/08	/98	
AW	- 5,812,811		Dube	y et al.		09/22	/98	
AX	- 5,826,265		Van I	luben et al.		10/20	/98	
AY	*5,867,643		Sutto	n		02/02	/99	
	No. AA AB AC AD AE AF AG AH AI AL AN AO AP AQ AR AS AT AU AV AX	Cite No. NUMBER AA - 4,819,234 AB *4,872,167 AC *5,168,554 AD - 5,301,325 AE - 5,450,575 AG *5,504,932 AH - 5,533,192 AI *5,557,761 AJ - 5,564,051 AK - 5,581,764 AL *5,594,864 AM - 5,598,560 AN *5,632,032 AO - 5,652,889 AP *5,712,996 AQ - 5,754,855 AR - 5,768,591 AS - 5,768,592 AT - 5,774,721 AU - 5,787,245 AV *5,805,892 AW - 5,812,811 AX - 5,826,265	Cite No. NUMBER Kind Code (if known) AA - 4,819,234 AB *4,872,167 AC *5,168,554 AD - 5,301,325 AE - 5,333,280 AF - 5,450,575 AG *5,504,932 AH - 5,533,192 AI *5,557,761 AJ - 5,564,051 AK - 5,581,764 AL *5,594,864 AM - 5,598,560 AN *5,632,032 AO - 5,652,889 AP *5,712,996 AQ - 5,754,855 AR - 5,768,591 AS - 5,768,592 AT - 5,774,721 AU - 5,787,245 AV *5,805,892 AW - 5,812,811 AX - 5,826,265	Cite No. NUMBER Kind Code (if known)	Cite U.S. Patent Document Number Kind Code (if known) AA	No. No.	U.S. PATENT DOCUMENTS Cite No. U.S. Patent Document NUMBER Name of Patente or Applicant of Cited Document Date of Cited Document AA - 4,819,234 Huber 04/04,4 AB *4,872,167 Maezawa et al. 10/03,4 AC *5,168,554 Luke 12/01,4 AD - 5,301,325 Benson 04/05,4 AE - 5,333,280 Ishikawa et al. 07/26,4 AF - 5,450,575 Sites 09/12,4 AG *5,504,932 Vassiliadis et al. 04/02,4 AH - 5,533,192 Hawley et al. 07/02,4 AI *5,557,761 Chan et al. 09/17,4 AJ - 5,564,051 Halliwell et al. 10/08,4 AK - 5,581,764 Fitzgerald et al. 12/03,4 AL *5,594,864 Trauben 01/14,4 AM - 5,562,889 Sites 07/29,4 AP *5,712,996 Schepers 01/27,4 AP *5,768,591 Robinson	Number N

EXAMINER	DATE CONSIDERED	
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	AZ	- 5,877	7,766		Bate	s et al.		03/0)2/99		
	ВА	- 5,887	7,166		Mall	ick et al.		03/2	23/99		
	BB	- 5,901	1,315		Edw	ards et al.		05/0)4/99		
	вс	- 5,903	3,730		Asai	et al.		05/1	1/99		_
	BD	- 5,913	3,925		Kahl	le et al.		06/2	22/99		
	BE	*5,953	,530		Rish	i et al.		09/1	14/99		
	BF	- 5,961	1,639		Mall	ick et al.		10/0)5/99		
	BG	- 5,966	5,539		Sriva	astava		10/1	12/99		
	ВН	- 5,978	3,902		Man	n		11/0)2/99		
1	ВІ	*6,002	2,872		Alex	ander III et al.		12/1	14/99		
SK	ВЈ	- 6,002	2,879		Radi	gan et al.	12/1		14/99		
	ВК	*6,009	,269		Burr	ows et al.		12/28/99			
	BL	- 6,029	,005		Radi	gan		02/2	22/00		
	ВМ	- 6,049	9,671		Slivl	ka et al.		04/1	1/00	RECEIVED	
	BN	*6,058	3,493		Talle	ey .		05/02/00		MAY 2 9 2002	
	во	- 6,059	,840		Clicl	k, Jr.		05/0	09/00		
	BP	- 6,072	2,952		Jana	kiraman		06/06/00		Technology Center 2100	
	BQ	- 6,094	1,716		Witt		07/25/00				
	BR	*6,101	,524		Choi	i et al.		08/0	08/00		
	BS	- 6,112	2,293		Witt			08/2	29/00		
	BT	*6,151	,701		Hum	phreys et al.		11/2	21/00		
	BU	- 6,151	1,704		Radi	gan		11/2	21/00		
		· ·			FOI	REIGN PATEN	NT DOCUME	NTS			
*EXAMINER INITIALS	Cite No.			Kind C			entee or Applicant d Document		Date of Publication of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	Т
SR	BV	Office EP	*EP042294	(if kno	iwn)	International B	usiness Machine	s	04/17/91		\vdash
SR	BW	EP	*EP045596		+-	ļ	usiness Machine	\rightarrow	11/13/91		 -
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_	SP	BZ	DE	*&DE19710252	 	Fujitsu Ltd.		02	2/26/98		\square
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	SR.	СВ	EP	*EP0855648	1	Texas Instrume	nts, Inc.	07	7/29/98	DECENTED	Н
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	1						nce Lisp Machine E				
	/	CE					nternational Symposium on Computer Architecture, 1983.				
		OL									
	1						FPS-164 Scientific C				
		CF	SIGPI	LAN '84 Symposiu	m on	Compiler Constru	iction, SIGPLAN No	otic	es 19(6):48-57,	, June 1984.	
	 		1 2 2		~ .						<u> </u>
							thout Synchronization	on (Overhead," 12tl	h Annual	
	_	CG	Sympo	osium on Compute	r Arc	nitecture," June 1	/, 1985.				
	 		- Tom	as I and and Migu	el Hu	met "Reduced Re	egister Saving/Resto	rin	g in Single-Wir	ndow Register Files,"	
				as Lang and Miquuter Architecture				1111	g iii ailigic-wii	ndow Register Pries,	
,	V -	СН	Comp	ater ruemicotare	10113,	VOI. 14, 110. 5, 51	mc 1700.				
	V		- Presi	ton Briggs et al., "	Colori	ing Heuristics for	Register Allocation,	" D	epartment of C	Computer Science,	Ħ
2	R/	CI		Jniversity, Houston			-			,	
		Cı		•							
										Registers, "Proceedings	
		CJ	of the	17th Annual Sym	posiur	n on Computer A	rchitecture," Seattle	, W	ashington, May	y 28 - 31, 1990.	}
	 			G : 1 Hort D							\vdash
								nted	l at the 17th Ar	nnual Symposium on	1 1
CK Computer Architecture, Seattle, Washington, May 29, 1990.							1 1				
*Dehart Alvarcan et al. "The Tora Computer System " Proceedings of 1000 ACM International Confessions								$\vdash \vdash$			
*Robert Alverson et al., "The Tera Computer System," Proceedings of 1990 ACM International Conference on Supercomputing, June 1990.											
	1	CL	011 50	percomputing, Juli	- 1//	·,					
	1		*Mark	A. Linton, "The	Evolu	tion of Dbx." USF	NIX Summer Confe	erei	nce, June 11-15	5, 1990.	
		СМ				,			,	,	
		CIVI									
							location for Subscrip				
İ	/	CN				on Programming l	Language Design an	d I	mplementation,	, White Plains,	
<u>'</u>	V	New York, June 20-22, 1990.									

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l		7	Group Art Unit		2833					
	MADEMARK		Examiner Name							
ľ	Sheet		4 Of 6 Attorney Docket	No.	32475-8006US2					
r		Г	- Fred C. Chow and John L. Hennessy, "The Priority-Based C			location."	П			
		со	ACM Transactions on Programming Languages and Systems,	Vol. 12, N	No. 4, October 1990, p	pp. 501-536.				
		СР	*David Callahan and Burton Smith, "A Future-Based Parallel Parallel Computer, Languages and Compilers for Parallel Computer and Compilers for Parallel Comp			e Highly-				
-		cq	*D.H. Bailey et al., "The NAS Parallel Benchmarks - Summa Aerodynamic Simulation (NAS) Systems Division, NASA An							
	/	CR	- David Callahan and Brian Koblenz, "Register Allocation via the ACM SIGPLAN '91 Conference on Programming Langua Canada, June 26, 28-1991.	Hierarchi ge Design	cal Graph Coloring," and Implementation,	Proceedings of RECEIVE	D			
r		_	*David Callahan, "Recognizing and Parallelizing Bounded Ro				\vdash			
		cs				MAY 2 9 20				
		ст	- Preston Briggs et al., "Coloring Register Pairs," ACM Letter Vol. 1, No. 1, March 1992, pp. 3-13.	s on Progr	amming Languages a	ŊŊĠŊŊĸſĸġnter	2100			
	3RV	CU	- Priyadarshan Kolte and Mary Jean Harrold, "Load/Store Ran ACM-SIGPLAN, June 1993.	nge Analys	is for Global Register	Allocation,"				
		cv	*"Method of Tracing Events in Multi-Threaded OS/2 Applica September 1993, pp. 19-22.	tions," IBN	M Tech. Disclosure Bu	ulletin,				
	-	cw	- Hiralal Agrawal, "Dominators, Super Blocks and Program C Symposium on Principles of Programming Languages, Portland							
		сх	*Preston Briggs and Keith D. Cooper, "Effective Partial Redundancy Elimination," ACM SIGPLAN Notices, Association for Computing Machinery, New York, Vol. 29, No. 6, June 1, 1994.							
r		 	*Smith, Burton, "Opportunities for Growth in High Performa	nce Compu	ting," November 199	4.	\square			
		CY								
		cz	*Vugranam C. Sreedhar and Guang R. Gao, "Incremental Computation of Dominator Trees," ACM SIGPLAN Notices, Association for Computing Machinery, New York, Vol. 30, No. 3, March 1, 1995.							
		DA	*Cliff Click, "Global Code Motion, Global Value Numbering," ACM SIGPLAN Notices, Association for Computing Machinery, New York, Vol. 30, No. 6, June 1, 1995.							
		DB	- Jens Knoops et al., "The Power of Assignment Motion," AC Language Design and Implementation," La Jolla, California,			Programming				
-				-						

EXAMINER	DATE CONSIDERED
Satir Rempi	6/1104
	is in conformance with MPEP 609. Draw line through citation if not in

						CO	OMPLETE IF KNOWN			
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	Sheet		5	of	6	Attorney Docket No.	32475-8006US2 MAY 2 9 2002			
		DD	*Major Syster	n Characteristics	of the TERA M	ГА, 1995.	Technology Center 2100			
		DE					otimizations for Compilation of for Parallel Computing, 1995.			
		DF	*Gail Alverso	n et al., "Process	or Management i	in the Tera MTA System	m," 1995.			
		DG	*Gail Alverso 1995.	on et al., "Scheo	luling on the Te	ra MTA," Job Schedu	ling Strategies for Parallel Processing,			
	-	DH				Register Coalescing," A 996, pp. 300-324.	CM Transactions on Programming			
	Ó	Dī				ructures," 1996 (retriev s?DataStructures/struc				
S	R	DJ				for Efficiently Maintain ork, Vol. 26, No. 2, Jun	ning Derived Data," Sigmod Record, e 1, 1997.			
	/	DK				Overview of Data Wares York, Vol. 26, No. 1	ehousing and OLAP Technology," 1, March 1997.			
			*Tera MTA, I	Principles of Ope	ration, November	r 18, 1997.				
		DL								
		DM	*Gail Alverson et al., "Tera Hardware-Software Cooperation," Proceedings of Supercomputing 1997, San Jose, California, November 1997.							
		DN	*Jennifer Anderson et al., "Continuous Profiling: Where Have All the Cycles Gone?" Operating Systems Review, ACM Headquarters, New York Vol. 31, No. 5, December 1, 1997.							
		*Jim Galarowicz et al., "Analyzing Message Passing Programs on the Cray T3E with PAT and VAMPIR," Research Report, "Online!," May 1998.								
		DP	_	im and Soo-Moo December 2, 19	• •	ath Enhanced Pipeline	Scheduling for Loops with Control			
	/	DQ	*Jonathan E. (ACM, 1998, p		nder L. Wolf, "Ev	rent Based Detection of	Concurrency," SIGSOFT '98			

	DATE CONSIDERED
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*EXAMINER: Initial if reference considered, whether or not criteria is	

Approved for use through 10/31/99. OMB 0651-0031

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Sheet		6	of	6	Attorney Docket No.	32475-8006US2				
SR	DQ		*Jonathan E. Cook and Alexander L. Wolf, "Event Based Detection of Concurrency," SIGSOFT '98 ACM, 1998, pp. 34-45.							
SR	DR	*Jenn-Yuan T pp. 24-35.	'sai et al., "Perfo	rmance Study of	a Concurrent Multithro	eaded Processor," IEEE, 1998,				
SR	DS		*Ji Minwen et al., "Performance Measurements for Multithreaded Programs," SIGMETRICS '98, ACM, 1998, pp. 168-170.							
SP	DT		h, "The Quest for cray.com/production."	-		" 1994, Cray MTA Historical Technical .				

RECEIVED

MAY 2 9 2002

Technology Center 2100

DATE CONSIDERED **EXAMINER**

* EXAMINER: Initial if reference considered, whether or not criteria is in conformance with MPEP 609.

conformance and not considered. Include copy of this form with next communication to applicant(s).

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